ASSIGNMENT 1

Textbook Assignment: "Common Maintenance Tools and Their Uses," Pages 1-1 through 1-48; and "Measuring Tools and Techniques," Pages 2-1 through 2-12.

1-1. You demonstrate good work habits by doing which of the following tasks?

1. Stowing tools in their proper place
2. Using handtools for their intended purposes only
3. Protecting tools against damage, breakage, and rust
4. All of the above

1-2. Ball-peen machinist's hammers are made in different weights. They are also divided into hard-faced and soft-faced classifications.

1. True
2. False

1-3. Which of the following tools is most suitable for driving a tight fitting shaft into its hole?

1. A hard-faced hammer
2. A soft-faced hammer
3. A carpenter's hammer
4. A sledge hammer

1-4. Which of the following statements best describes the effect of choking up on a hammer handle?

1. It increases the lever arm
2. It reduces the striking force of the blow
3. It produces a more effective blow
4. It makes it easier to hold the hammer upright

1-5. Which of the following is a recommended practice in the use and care of a rawhide mallet?

1. It may be used to drive nails or strike steel surfaces
2. The rawhide may be conditioned by exposure to sunlight
3. The handle may be used for prying
4. A light film of oil should be applied to the head before storage

1-6. What characteristic determines the size of an open-end wrench?

1. The overall length of the wrench
2. The width of the opening between the wrench jaws
3. The thickness of the wrench jaws
4. The minimum amount of "play" between the jaws

1-7. The most frequently used box-end wrench has how many "points" or notches that contact the nut or bolt to be loosened or tightened?

1. 6
2. 8
3. 10
4. 12

1-8. Which of the following wrenches is best suited for breaking a nut loose and then unscrewing it quickly?

1. An open-end "5" wrench
2. A 15-degree offset open-end wrench
3. A box-end wrench
4. A combination box open-end wrench

1-9. A box-end wrench with a 15-degree offset has what advantage, if any, over a straight-handle box-end wrench?

1. The offset allows more handle swing
2. Increased leverage
3. The offset allows clearance over nearby parts
4. None

1-10. Which of the following socket handle is used to rapidly tighten or loosen nuts or bolts using a series of partial turns?

1. Hinged handle
2. Speed handle
3. Ratchet handle
4 Sliding T-bar handle

1-11. Which of the following socket handle is used for removing nuts or bolts that have been loosened first with another wrench?

1. Hinged handle
2. Speed handle
3. Ratchet handle
4 Sliding T-bar handle

1-12. Which of the following socket handle is used for applying the most leverage to break loose tight nuts?

1. Hinged handle
2. Speed handle
3. Ratchet handle
4 Sliding T-bar handle

1-13. When you are using a micrometer setting type torque wrench, how is the amount of torque applied indicated?

1. By pointer or needle movement
2. The socket slips for a short distance
3. An audible click and free movement of the handle for a short distance
4. The user depends on a sense of touch or "feel" acquired through experience

1-14. What advantage is there to using an adjustable wrench instead of a box-end wrench to tighten or loosen a nut?

1. An adjustable wrench can be made to fit odd-sized nuts or bolts
2. An adjustable wrench cannot damage hard to turn nuts
3. An adjustable wrench is less likely to be used improperly
4. Either jaw of an adjustable wrench may be adjusted to fit any size or shape nut or bolt

1-15. How should you guide straight hand tin snips when cutting light sheet metal, in relation to the layout line?

1. Guide snips on the inside of the line
2. Guide snips on the outside of the line
3. Guide snips directly on the line
4. Guide snips either directly on the line or just inside of it

1-16. How are the teeth arranged on a double alternate set hacksaw blade?

1. They are arranged in short sections on each side of the blade
2. They are arranged so that every third tooth is in line with the blade
3. They are staggered in pairs, two to the left and two to the right
4. They are staggered, one to the left and one to the right

1-17. What term denotes the groove cut through the head of a cap screw or machine bolt?

1. Guide
2. Step
3. Kerf
4. Set

1-18. What chisel is used for cutting keyways and square corners?

1. Round nose
2. Cape
3. Flat
4. Diamond point

1-19. What chisel is used for chipping inside corners?

1. Round nose
2. Cape
3. Flat
4. Diamond point

1-20. What chisel is used for cutting V-grooves and sharp corners?

1. Round nose
2. Cape
3. Flat
4. Diamond point

1-21. What chisel is used for cutting rivets and thin medal sheets?

1. Round nose
2. Cape
3. Flat
4. Diamond point

1-22. Which of the following items should you wear when chipping metal with a chisel?

1. Canvas gloves
2. A shop apron
3. Safety goggles
4. Rubber gloves

1-23. At what angle are the teeth of a single-cut file set?

1. 40°
2. 65°
3. 75°
4. 90°

1-24. Alternate-position crossfiling is best suited to perform which of the following operations?

1. Filing round stock
2. Polishing a flat surface
3. Locating high and low spots
4. Roughing a smooth surface

1-25. Rubbing chalk into the teeth of a file is the best method used to prevent "pinning" of the file.

1. True
2. False

1-26. When polishing a metal surface with emery cloth, what substance should you apply to the surface?

1. Chalk dust
2. Bright work polish
3. Prussian blue
4. Lubricating oil

1-27. What are the spiral grooves of a twist drill called?

1. The body
2. The flute
3. The shank
4. The margin

1-28. What is the function of the lip on a twist drill?

1. To cut away the metal or wood being drilled
2. To allow the twist drill to revolve without binding
3. To center the twist drill
4. To provide shank clearance

1-29. A center punch is used primarily to perform which of the following tasks?

1. To mark the center of a hole to be drilled
2. To line up holes in mating assembly parts
3. To free pins that are stuck or "frozen" in their holes
4. To scribe layout lines

1-30. You have marked the intersection of two layout lines with a prick punch, but the punch mark is not at the exact center. How should you now center the punch mark?

1. Draw a new layout
2. Select a new center point in the layout
3. Make a second punch mark opposite of the first mark
4. Slant the punch toward the intersection of the lines and enlarge the punch mark

1-31. Taps are used to cut internal threads, and dies are used to cut external threads in metal, plastics, and hard rubber.

1. True
2. False

1-32. What sequence of taps should be used to tap a blind hole?

1. Plug, taper, bottoming
2. Taper, bottoming, plug
3. Plug, bottoming, taper
4. Taper, plug, bottoming

1-33. A chamfer length of only 1 to 1 1/2 threads is found on what type of tap?

1. Taper
2. Bottoming
3. Plug
4. Pipe

1-34. How should you make adjustments to a two-piece collet die?

1. Turn the collet cap
2. Push a release button
3. Turn setscrews
4. Turn the guide

1-35. What is the cutting capacity of a number 2 pipe cutter?

1. 1 to 2 in.
2. 1 1/2 to 3 in.
3. 2 to 3 in.
4. 2 to 4 in.

1-36. The single flaring tool is used to flare tubing ranging in what sizes?

1. 3/16 through 3/8 in. only
2. 3/16 through 1/2 in.
3. 1/4 through 7/16 in. only
4. 1/4 through 1/2 in.

1-37. Standard screwdrivers are classified by size according to the combined length of which of their following parts?

1. Shank and blade only
2. Handle and shank only
3. Handle and blade only
4. Handle, shank, and blade

1-38. How are combination slip-joint pliers distinguished from regular slip-joint pliers?

1. They have an adjustable pivot at the jaws
2. They are able to hold objects regardless of their shape
3. They have a side cutter at the junction of the jaws
4. They have dual joints allowing a larger range of adjustment

1-39. Which type of pliers may be used as a clamp or vice?

1. Slip-joint pliers
2. Water pump pliers
3. Wrench pliers
4. Groove-joint pliers

1-40. Of the following operations, which one is best accomplished by using diagonal pliers?

1. Grasping cylindrical objects
2. Bending light gauge materials
3. Cutting small objects flush with the surface
4. Straightening bent cotter pins

1-41. What type of file should be used to sharpen the serrations on the jaws of pliers?

1. A dead smooth file
2. A single cut flat file
3. A small triangular file
4. A small tapered square file

1-42. What is the maximum allowable length of an electric extension cord used on the flight deck?

1. 25 ft
2. 50 ft
3. 75 ft
4. 100 ft

1-43. Which of the following pneumatic tools is best suited for use in scaling an irregular surface?

1. Rotary scaler
2. Needle scaler
3. Shale scaler
4. Jitterbug scaler

1-44. Generally, pneumatic impact wrenches operate most efficiently when the air supplied is in what pressure range?

1. 50 to 80 psi
2. 80 to 90 psi
3. 80 to 100 psi
4. 100 to 120 psi

1-45. The term "blueprint reading" is best defined by which of the following statements?

1. The reading aloud of the printed matter in the legends
2. The reading of related matter to help you understand the blueprint symbols
3. The interpretation of the ideas expressed on drawings
4. The interpretation of your ideas compared to the ideas expressed on the drawing

1-46. In what corner of a blueprint is the revision block usually found?

1. Lower left
2. Lower right
3. Upper left
4. Upper right

1-47. Of the following types of blueprints, which one would show the various parts of a machine and how the parts fit together?

1. Detail print
2. Plan view
3. Assembly print
4. Unit print

1-48. How should a 12-inch steel rule be held to obtain an accurate measurement of a surface?

1. At a slight angle to the surface
2. With the edge at a slight distance from the surface
3. Flat along the surface
4. With the edge along the surface

1-49. What is the most practical means of measuring the outside diameter of a pipe?

1. Trace the circumference of the pipe on a piece of paper and measure across the tracing
2. Stop one end of a rule at the pipe edge, swing the rule, and read the maximum measure
3. Stop one end of the rule at the pipe edge, swing the rule, and read the minimum measure
4. Wrap a flexible rule around the pipe

1-50. Which of the following measuring tools is best used to measure the inside of a box frame or foot locker?

1. A folding rule with a sliding extension
2. A carpenter's square
3. An inside caliper
4. A flexible tape rule

1-51. Which of the following tools should you use to take a measurement over a long distance?

1. A folding rule
2. A folding rule with sliding extension
3. A hook rule
4. A fiberglass tape rule

1-52. Which type of inside calipers should be used to measure a chamfered cavity?

1. Transfer firm joint
2. Adjustable firm joint
3. Spring
4. Hermaphrodite

1-53. Which type of calipers should be used to locate the center of a shaft?

1. Transfer
2. Hermaphrodite
3. Inside
4. Outside

1-54. Which of the following calipers may be used to make inside and outside measurements?

1. Combination firm joint
2. Solid-joint
3. Spring
4. Adjustable firm joint

1-55. What type of micrometer is used to measure the diameter of solid round bar?

1. Inside
2. Outside
3. Depth
4. Screw thread

1-56. What type of micrometer is used to measure the pitch diameter of a screw?

1. Inside
2. Outside
3. Depth
4. Screw thread

1-57. What type of micrometer is used to measure the bore of a cylinder?

1. Inside
2. Outside
3. Depth
4. Screw thread

1-58. What type of micrometer is used to measure piston travel in a cylinder?

1. Inside
2. Outside
3. Depth
4. Screw thread

1-59. Each of the 25 marks on the thimble of the standard outside micrometer represents what part of an inch?

1. 0.001 in.
2. 0.005 in.
3. 0.025 in.
4. 0.040 in.

1-60. What characteristic of a micrometer determines its range?

1. The length of its frame
2. The distance that the spindle can travel
3. The distance that the spindle travels with each revolution of the thimble
4. The length of the work it will measure

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